

Replacement Sheet
Serial No. 10/597,373
Inventor: M. Edward Medof

3121 actacagggc accgactcat tggtaactca tctgctgaat gtatcctctc aggcaatact
3181 gcccattgga gcacgaagcc gccaatttgt caacgaattc ctttgtggct acccccaacc
3241 atcgccaatg gagatttcat tagcaccaac agagagaattt ttcactatgg atcagtggtg
3301 acctaccgct gcaatcttgg aagcagaggg agaaaagggtgt ttgagcttgc gggtgagcc
3361 tccatatact gcaccagcaa tgacgatcaa gtggcatct ggagccggcc cccccctcag
3421 tgcattatac ctaacaaatg cacgcctcca aatgtggaaa atggaatattt gttatctgac
3481 aacagaagct tattttcctt aatgaagttt gtggagttt ggtgtcagcc tggcttgc
3541 atgaaaggac cccgcgtgt gaagtgcag gccctgaaca aatgggagcc agagttacca
3601 agctgctcca ggggtgtca gcccctcca gaaatcctgc atggtgagca taccggcaagc
3661 catcaggaca accttgcacc tggcagggaa gtgttctaca gctgtgagcc tggctatgac
3721 ctcagagggg ctgcgtctc gcactgcaca ccccaaggag actggagcc tgaaggcccc
3781 agatgtgcag tgaatccctg tggacttc ttgggtcaac tccctcatgg ccgtgtgcta
3841 tttccactt atctccagct tggggcaag gtgtccttgc tctgtatga agggtttcgc
3901 ttaaaggcga gttccgttag tcattgtgtc ttgggtggaa tgagaagcct tggaaataac
3961 agtgtcctg tggtaaca tatctttgtt ccaaattcctc cagctatcct taatggaga
4021 cacacaggaa ctccctctgg agatattccc tatggaaaag aaatatctt cacatgtgac
4081 ccccacccac acagagggat gaccttcaac ctcattgggg agagcaccat ccgtgcaca
4141 agtgcaccctc atgggaatgg ggttggagc agccctgccc ctcgcgtgtc actttctgtt
4201 cgtgctggc actgtaaaac cccagagcag ttccatttgc ccagtcctac gatcccaatt
4261 aatgactttg agttccatgtt cgggacatct ttgaattatg aatgcgtcc tgggtatTTT
4321 gggaaaatgt tctctatctc ctgccttagaa aacttggctt ggtcaagtgt tgaagacaac
4381 tggtagacgaa aatcatgtgg acctccacca gaacccttca atggaatggt gcatataaaac
4441 acagatacac agttggatc aacagttat tattttgtt atgaaagggtt tcgactcatt
4501 ggttcccccattt ctactacttg tctcgcttca ggcaataatg tcacatggga taagaaggca
4561 cctatttgc agatcatatc ttgtgagcca cctccaaaccat tatccatgg agacttctac
4621 agcaacaataa gaacatctt tcacaatggg acgggtggtaa cttaccatgtt ccacactgg
4681 ccagatggag aacagctgtt tgagttgtt ggagaacggt caatatattt caccagcaaa
4741 gatgatcaag ttgggtttt gggcggcctt cccctcggtt gtatttctac taataatgc
4801 acagctccag aagttggaaa tgcaatttggat gtaccaggaa acaggagttt cttttccctc
4861 actgagatca tcaatgtttag atgtcagccc ggggttgc tggtagggc ccacactgt
4921 cagtggcaga ccaatggcag atggggggcc aagctggcactt actgcgtccag ggtgtgtc
4981 ccgcctccag aaatcctgca ttgtgagcat accctaaagcc atcaggacaa cttttccat
5041 gggcaggaag tggcttacag ctgtgagccc agctatgacc tcagagggcc tgcgtctctg
5101 cactgcacgc cccaggggaga ctggagccctt gaagccctta gatgtacagt gaaatcctgt
5161 gatgacttcc tggccaaactt ccctcatggc ctgtgtctac ttccacttta tccatgt
5221 ggggcaaaagg tggcttttgc ttgcgtatggaa ggggttccat taaaaggcag gtctgtatgt
5281 cattgtgtct tggctggaaat gaaaggccctt tggaaatggca gtgttccatgt gtgtgaacaa
5341 atctttgtc caaatcctcc agtctatcctt aatggggagac acacaggaac tccctttgg
5401 gatattccctt atggaaaaga aatatcttac gcatgcgaca cccaccaga cagagggatg
5461 accttcaacc tcaatggggaa gagctccatc cgctgcacaa gtgaccctca agggaaatgg
5521 gtttggagca gcccgtcccc tggctgtgaa ctttctgtt ctgctgcctt cccacatcca
5581 cccaaagatcc aaaaacgggca ttacattggg ggacacgtat ctctatatctt ccctggatg
5641 acaatcagct acacttgttgc ccccgctac ctgttgtgg gaaaggccctt cattttctgt
5701 acagaccagg gaatctggag ccaattggat cattatttgc aagaagtaaa ttgttagctt
5761 ccactgttta tgaatggaaat ctgcaggag tttagaaatgt aaaaagtata tcaatgt
5821 gattatgttgc ttgttgttgc tgaatggg tataactctgg aaggcgtcc ctggagcc
5881 tggccaggccg atgacagatgg ggacccttgc ctggccaaat gtacctctcg tgcacatgt
5941 gctctcatatg ttggcactttt atctggatcg atcttcttta ttttactcat cattttccct
6001 tcttggatata ttctaaagca cagaaaaggc aataatgcac atgaaaacccc taaagaagtg
6061 gctatccatt tacatttgc agggggcagc agcgttccatc cccgaactctt gcaacaaat
6121 gaagaaaataa gcaagggtccctt tccttgacaaat agtactataac agctgaagaa catctcgat
6181 acaatttgg tggggaaaggaa gccaattgtt ttcacacagaa tcaatgttgc gcttcataaa
6241 gtgttgcag tggacttcaca gagacgcaga catgtgcact tgaatgtgtt gccccttccc
6301 tggtaaccttgc caaatcctcc gctctttgtt gtgcgtactt gtaaaccggcc cacccttct
6361 cctcgcttca aacgcacaca gttatctgc actggggaaaag actgcatttta ggagatagaa
6421 aatagttgg attactttaa ggaataaggtt gttgccttgc atttctgtt tggtaaggtgg

Fig. 3 (Cont.)

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6481 tcactgttct tttttaaaat attttaataa tggaaatgggc tcagtaagaa gagcttgaa
 6541 aatgcagaaa gttatgaaaa ataagtcaact tataattatg ctacctactg ataaccactc
 6601 ctaatatttt gattcatttt ctgcctatct tctttcacat atgtgtttt ttacatacgt
 6661 actttcccc ccttagttt tttcccttta ttttatagag cagaacccta gtctttaaa
 6721 cagtttagag tggaaatataat gctatatcag ttttacttt ctctagggag aaaaattaat
 6781 ttactagaaa ggcatgaaat gatcatggga agagtggtt agactactga agagaaatata
 6841 ttggaaaata agatttcgat atcttctttt ttttgagat ggagtctggc tctgtctccc
 6901 aggctggagt gcagtggcgt aatctcgct cactgcaacg tccgcctccc g

Fig. 3 (Cont.)

Fig. 4A

SEQ. ID NO:5

MEPPGRRECPFPSWRFPGLLLAAMVLLLYSFSDACEEPPTFEAMELIGKP	50
KPYYEIGERVDYKCKKGFYIYIPPLATHTICDRNHTWLPVSDDACYRETCP	100
YIRDPLNGQAVPANGTYEFGYQMHFICNEGYYLIGEELYCELKGSVAIW	150
SGKPPICEKVLCPPPPIKNGKHTFSEVEVFEYLDAVTYSMDPAPGPDPF	200
SLIGESTIYCGDMSVWSRAAPECKVVKCRFPVVENKGQISGFGKFKYYKA	250
TVMFECDKGFYLDGSDTIVCDSNSTWDPPVPKCLKVSTSSTKSPASSAS	300
GPRPTYKPPVSNYPGYPKPEEGILDSDLDVWVIAVIVIAIVVGAVICVVP	350
YRYLQRRKKKGADGGAEYATYQTKSTTPAEQRG	

Fig. 4B

SEQ. ID NO:6

1 tctgctttcc tccggagaaa taacagcgcc ttccggcccg cgcatggagc ctccggcccg
 61 ccgogagtgt cccttcctt cctggcgctt tcctgggttg ctctggcgcc ccatgggttt
 121 gctgctgtac tccttcctcc atgcotgtga ggagccacca acatttgaag ctatggagct
 181 cattggtaaa ccaaaaccct actatgagat tggtaacga gtagattata agtgtaaaaaa
 241 aggataacttc tatataccctc ctcttgcaccc cccatactatt tggatcgga atcatacatg
 301 gctacctgtc tcagatgacg cctgttatag agaaaacatgt ccatatatac gggatcctt
 361 aaatggccaa gcagtcctcg caaatggac ttacgagtt ggttatcaga tgcactttat
 421 ttgtatgag gtttattact taattggta agaaaattcta tattgtgaac taaaaggatc
 481 agtagcaatt tgagcggta agccccaat atgtaaaaag gttttgtgtc caccaccc
 541 aaaaataaaa aatggaaaaac acacccat tgaagttagaa gtatttgagt atcttgatgc
 601 agtaacttat agttgtgatc ctgcacccgg accagatcca ttttcaactt ttggagag
 661 cacgattttat tgggtgaca attcagtgtg gaggcgtgtc gtcaggatgt gtaaagtgg
 721 caaatgtcga tttccacttgc tggaaaatgg aaaacagata tcaggatttgg gaaaaaaaatt
 781 ttactacaaa gcaacagtttgc tggatgttgc ttttacccgc atggcagcga
 841 cacaattgtc tggatgttgc acagttttgc ggatccccca gttccaaagt gtcttaaagt
 901 gtcgacttct tccactacaa aatctccagc gtccagggtcc tcaggatctt ggcctactt
 961 caaggccca gtcctaaattt atccaggata tcctaaacctt gaggaaaggaa tacttgacag
 1021 tttggatgtt tggatgttgc ctgtgattgt tattgttgc ttttacccgc atggcagcga
 1081 ttgtgtgtc ccgtacatgttgc atcttcaatgg gaggaaaggaa aaggggaaagg cagatgg
 1141 agctgaatat gccacttacc agactaaatc aaccacttcca gcagagcaga gaggctaat
 1201 agattccaca acctggtttgc ccaggatcttgc ttttgcattt attaaaatct tcaatagtt
 1261 ttattctgttgc tggatgttgc atcttcaatgg gaggaaaggaa aaggggaaagg cagatgg
 1321 ttgtatgttgc tggatgttgc atcttcaatgg gaggaaaggaa aaggggaaagg cagatgg
 1381 agattggcttgc cttcccttta aataacactt agatttatttgc gaccaggatgtc
 1441 ctggatgttgc tggatgttgc atcttcaatgg gaggaaaggaa aaggggaaagg cagatgg
 1501 tagttcacaatgg gaggaaaggaa aaggggaaagg cagatgg

I	G	E	S	T	I	R	C	T	S	D	P	Q	G	N	G	V	W	S	S
P	A	P	R	C	G	I	H	H	H	H	H	H							

Fig. 8A (Cont.)

Fig. 8B

SEQ. ID NO: 14

ATGACCGTCGCGCGGCCGAGCGTGCCCCGGCGCTGCCCTGGCGCTGCC
CTCCTCGGGGAGCTGCCCGCTGCTGCTGGTGTGGCTGCCCTGGCGCTGGGGT
GACTGTGGCCTTCCCCAGATGTACCTAATGCCAGCCAGCTTGGAAAGGCCGTACAAGTTT
CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTGAAAGAACTTCTGGCGAGAAG
GACTCAGTGTCTGCCCTAAGGGCAGTCAGTCAGATATTGAAGAGTTCTGCAATCGTAGC
TGCAGGGTGCACAAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT
TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCTCAGGTTACAGAAGAGAACCTCTCTA
TCACCAAAACTAACCTGCCCTCAGAATTAAAATGGTCCACAGCAGTCGAATTGGTAAAAAG
AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACAGGTGGCATATTA
TTTGGTGCACCCATCTCCTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTCTAGT
TTTGTCTTATTCAGGCAGCTCTGTCAGTGGAGTGACCCGTGCCAGAGTGCAGAGAAATT
TATTGTCCAGCACCACCAATTGACAATGGAATAATTCAAGGGAACGTGACCATTATGGA
TATAGACAGTCTGTAACGTATGCATGTAATAAAGGATTACCATGATTGGAGAGCACTCTATT
TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCACCACCTGAATGC
TCGAGTCCTAACAAATGCACGCCCTCAAATGTGGAAATGGAAATTGGTATCTGACAAC
AGAAGCTTATTTCCCTAAATGAAGTTGTGGAGTTAGGTGTCAGCCTGGCTTGTCA
AAAGGACCCCGCCGTGTGAAGTGCAGGCCCTGAACAAATGGAGCCGGACTACCAAGC
TGCTCCAGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC
AAGGACAACCTTCACCTGGCAGGAAGTGTCTACAGCTGTGAGCCCGCTACGACCTC
AGAGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGAGCCCCACA
TGTGAAGTGAATCCTGTGATGACTCATGGCCAACCTCTTAATGGCCGTGTGCTATT
CCAGTAAATCTCCAGCTGGAGCAAAGTGGATTGTTGTGATGAAGGATTCAATT
AAAGGCAGCTCTGCTAGTTACTGTGCTTGGCTGGAATGGAAGCCTTGGAAATAGCAGT
GTTCCAGTGTGTAACAAATCTTGTCCAAGTCCTCAGTTACCTAATGGGAGACAC
ACAGGAAAACCTCTGGAAGTCTTCCCTTGGAAAAGCAGTAAATTACACATGCGACCCC
CACCCAGACAGAGGGACGAGCTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT
GACCCCTCAAGGGAAATGGGGTTGGAGCAGCCCTGCCCTCGCTGTGGAATTCTGGGTCA
TGTCAAGCCCCAGATCATTCTGTTGCCAAGTTGAAAACCAAACCAATGCATCTGAC
TTTCCCATTGGGACATCTTAAAGTACGAATGCCGTCTGAGTACTACGGGAGGCCATT
TCTATCACATGTCTAGATAACCTGGTCTGGTCAAGTCCAAAGATGTCTGTAAACGTAA
TCATGTAAAACCTCTCCAGATCCAGTGAATGGCATGGTCATGTGATCACAGACATCCAG
GTTGGATCCAGAACTATTCTGTACTACAGGGCACCGACTCATTGGTCACTCATCT
GCTGAATGTATCCTCTCGGGCAATGCTGCCATTGGAGCACGAAGCCGCAATTGTCAA
CGAATTCTGTGGCTACCCCCCACCACGCCAATGGAGATTCAATTAGCACCAACAGA
GAGAATTTCACATGGATCAGTGGTGACCTACCGCTGCAATCTGGAAGCGGAGGGAGA
AAGGTGTTGAGCTTGTGGGTGAGCCCTCCATATACTGCAACAGCAATGACGATCAAGTG
GGCATCTGGAGCGGGCCGGCCCTCAGTGCATTACCTAACAAATGCACGCCCTCAAAT
GTGGAAAATGGAATATTGGTATCTGACAACAGAAGCTTATTTCCTTAAATGAAGTTGTG
GAGTTTAGGTGTCAGCCTGGCTTGTGATGAAAGGACCCGCCGTGTGAAGTGCAGGCC
CTGAACAAATGGGAGCCGGAGCTACCAAGCTGCTCCAGGGTATGTCAGCCACCTCCAGAT
GTCCTGCATGCTGAGCGTACCCAAAGGGACAAGGACAACCTTCAACCGGGCAGGAAGTG
TTCTACAGCTGTGAGCCCGCTATGACCTCAGAGGGCTGCGTCTATGCGCTGCACACCC
CAGGGAGACTGGAGCCCTGCAGCCCCACATGTGAAGTGAATCCTGTGATGACTTCATG
GGCCAACCTCTTAATGGCCGTGTGCTATTCCAGTAAATCTCCAGCTGGAGCAAAAGTG

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GATTTGTTGTGATGAAGGATTCAATTAAAAGGCAGCTCTGCTAGTTATTGTGTCTTG
 GCTGGAATGGAAAGCCTTGGAAATAGCAGTGTCCAGTGTGAACAAATCTTTGTCCA
 AGTCCTCCAGTTATTCTAATGGGAGACACACAGGAAACCTCTGGAAGTCTTCCCTT
 GGAAAAGCAGTAAATTACACATGCGACCCCCACCCAGACAGAGGGACGAGCTCGACCTC
 ATTGGAGAGAGCACCATCCGCTGCACAAGTGAACCTCAAGGAATGGGGTTGGAGCAGC
 CCTGCCCCTCGCTGGAATTCATCACCATCACTAAGATCT

Fig. 8B (Cont.)

Fig. 9A
 SEQ ID NO:15

L	L	G	E	L	P	R	L	L	L	V	A	R	P	S	V	P	A	A	L	P
D	C	G	L	P	P	D	V	P	N	A	Q	P	A	L	E	G	R	T	S	F
P	E	D	T	V	I	T	Y	K	C	E	E	S	F	V	K	I	P	G	E	K
D	S	V	I	C	L	K	G	S	Q	W	S	D	I	E	E	F	C	N	R	S
C	E	V	P	T	R	L	N	S	A	S	L	K	Q	P	Y	I	T	Q	N	Y
F	P	V	G	T	V	V	E	Y	E	C	R	P	G	Y	R	R	E	P	S	L
S	P	K	L	T	C	L	Q	N	L	K	W	S	T	A	V	E	F	C	K	K
K	S	C	P	N	P	G	E	I	R	N	G	Q	I	D	V	P	G	G	T	S
F	G	A	T	I	S	F	S	C	N	T	G	Y	K	L	F	G	S	T	R	E
F	C	L	I	S	G	S	S	V	Q	W	S	D	P	L	P	E	C	R	H	Y
Y	C	P	A	P	P	Q	I	D	N	G	I	I	Q	G	E	R	D	H	Y	G
Y	R	Q	S	V	T	Y	A	C	N	K	G	F	T	M	I	G	E	H	H	I
Y	C	T	V	N	N	D	E	G	E	W	S	G	P	P	E	C	S	D	N	M
S	S	P	N	K	C	T	P	P	N	V	E	N	G	I	L	V	S	F	V	M
R	S	L	F	S	L	N	E	V	V	E	F	R	C	Q	P	G	F	P	R	S
K	G	P	R	R	V	K	C	Q	A	L	N	K	W	E	P	E	L	P	D	L
C	S	R	V	C	Q	P	P	P	D	V	L	H	A	E	R	T	Q	R	P	D
K	D	N	F	S	P	G	Q	E	V	F	Y	S	C	E	P	G	Y	D	L	T
R	G	A	A	S	M	R	C	T	P	Q	G	D	W	S	P	A	A	P	T	F
C	E	V	K	S	C	D	D	F	M	G	Q	L	L	N	G	R	F	Q	L	F
P	V	N	L	Q	L	G	A	K	V	D	F	V	C	D	E	G	F	N	S	S
K	G	S	S	A	S	Y	C	V	L	A	G	M	E	S	L	W	N	G	R	H
V	P	V	C	E	Q	I	F	C	P	S	P	P	V	I	P	N	T	C	D	P
T	G	K	P	L	E	V	F	P	F	G	K	A	V	N	Y	T	C	T	S	P
H	P	D	R	G	T	S	F	D	L	I	G	E	S	T	I	R	C	T	G	H
D	P	Q	G	N	G	V	W	S	S	P	A	P	R	C	G	I	L	A	S	D
C	Q	A	P	D	H	F	L	F	A	K	L	K	T	Q	T	N	A	P	R	F
F	P	I	G	T	S	L	K	Y	E	C	R	P	E	Y	Y	G	R	S	P	D
S	I	T	C	L	D	N	L	V	W	S	S	P	K	D	V	C	K	R	I	K
S	C	K	T	P	P	D	P	V	N	G	M	V	H	V	I	T	D	I	Q	S
V	G	S	R	I	N	Y	S	C	T	T	G	H	R	L	I	G	H	S	C	Q
A	E	C	I	L	S	G	N	A	A	H	W	S	T	K	P	P	I	T	N	R
R	I	P	C	G	L	P	P	T	I	A	N	G	D	F	I	S	S	T	G	G
E	N	F	H	Y	G	S	V	V	T	Y	R	C	N	P	G	S	G	G	R	V
K	V	F	E	L	V	G	E	P	S	I	Y	C	T	S	N	D	D	Q	P	V
G	I	W	S	G	P	A	P	Q	C	I	I	P	N	K	C	T	P	P	P	N

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V	E	N	G	I	L	V	S	D	N	R	S	L	F	S	L	N	E	V	V
E	F	R	C	Q	P	G	F	V	M	K	G	P	R	S	V	K	C	Q	A
L	N	K	W	E	P	E	L	P	S	C	S	R	V	C	Q	P	C	P	D
V	L	H	A	E	R	T	Q	R	D	K	D	N	F	S	M	R	Q	P	V
F	Y	S	C	E	P	G	Y	D	L	R	G	A	A	S	C	D	F	E	P
Q	G	D	W	S	P	A	A	P	T	C	E	V	K	S	C	D	A	T	M
G	Q	L	L	N	G	R	V	L	F	P	V	N	L	Q	L	G	C	V	V
D	F	V	C	D	E	G	F	Q	L	K	G	S	S	Q	A	S	F	P	L
A	G	M	E	S	L	W	N	S	S	H	P	V	C	E	Q	F	C	P	V
S	P	P	V	I	P	Y	T	R	H	P	D	R	G	T	E	F	F	D	F
G	K	A	V	N	Y	T	C	D	T	S	D	P	Q	G	N	S	V	F	S
I	G	E	S	T	I	R	C	T	S	D	P	Q	G	N	G	V	F	F	E
P	A	P	R	C	G	I	H	H	H	F	P	Q	A	D	H	L	Y	W	E
A	L	K	T	Q	T	N	A	S	D	F	P	I	G	T	S	L	V	W	N
C	R	P	E	Y	Y	G	R	P	F	S	I	T	C	L	D	N	L	V	N
S	S	P	K	D	V	C	K	R	K	S	C	K	T	P	D	P	P	P	V
G	M	V	H	V	I	T	D	I	Q	V	H	R	L	I	G	H	S	S	Q
G	S	R	I	N	Y	S	C	T	T	G	H	R	L	I	G	H	S	C	R
A	E	C	I	L	S	G	N	A	A	H	W	S	T	I	K	P	S	T	R
A	R	I	P	C	G	L	P	P	T	I	A	N	G	D	F	P	S	G	V
E	N	F	H	Y	G	S	V	V	T	Y	R	C	N	T	S	N	D	G	V
K	V	F	E	L	V	G	E	P	S	I	I	Y	C	T	S	C	T	P	V
G	I	W	S	G	P	A	P	Q	C	I	I	R	G	N	K	P	E	C	Q
V	E	N	G	I	L	V	S	D	N	R	S	L	F	R	C	L	N	E	V
E	F	R	C	Q	P	G	F	V	M	K	G	P	R	V	F	P	Q	C	P
L	N	K	W	E	P	E	L	P	S	C	S	R	N	S	Q	L	D	F	M
V	L	H	A	E	R	T	Q	R	D	K	D	N	F	S	M	R	G	E	V
F	Y	S	C	E	P	G	Y	D	L	R	G	A	K	S	C	L	D	F	P
Q	G	D	W	S	P	A	A	P	T	C	E	V	K	S	Q	L	A	K	V
G	Q	L	L	N	G	R	V	L	F	P	V	N	L	S	A	S	Y	C	L
D	F	V	C	D	E	G	F	Q	L	K	G	S	V	C	E	Q	I	F	P
A	G	M	E	S	L	W	N	S	S	V	P	V	C	P	E	L	F	F	P
S	P	P	V	I	P	N	G	R	H	T	G	K	T	G	N	T	G	F	S
G	K	A	V	N	Y	T	C	D	P	H	P	D	R	G	N	G	S	V	S
I	G	E	S	T	I	R	C	T	S	D	P	Q	G	N	G	T	G	F	D
P	A	P	R	C	G	I	H	H	H	H	H	H	H	H	H	H	H	H	S

Fig. 9A (Cont.)

Fig 9B
 SEQ. ID NO:16

ATGACCGTCGCGCGGCCGAGCGTGCCCCGCGCGCTGCC
 CTCCTCGGGAGCTGCCCGGCTGCTGCTGGTGTGCTGCCCTGCCGGCGTGTGGG
 GACTGTGGCCTTCCCCAGATGTACCTAACGCCCAGCCAGCTTGGAAAGGCCGTACAAGTTT
 CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTGTGAAAATTCTGGCGAGAAG
 GACTCAGTGATCTGCCTTAAGGGCAGTCATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC
 TGCGAGGTGCCAACAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT
 TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTCTCTA

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TCACCAAAACTAACCTGCCTTCAGAATTAAAATGGTCCACAGCAGTCGAATTTGTAAAAAG
AAATCATGCCCTAACCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTGGCATATT
TTTGGTGCAACCCTCTCATGTAACACAGGGTACAAATTATTGGCTCGACTCTAGT
TTTGCTTATTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATT
TATTGTCCAGCACCACCAAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGA
TATAGACAGTCTGTAACGTATGCACTGTAATAAAGGATTCAACATGATTGGAGAGCACTCTATT
TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCACCACCTGAATGC
TCGAGTCCTAACAAATGCACGCCTCAAATGTGGAAATATTGGTATCTGACAAC
AGAAGCTTATTTCCCTAAATGAAGTGTGGAGTTAGGTGTAGCCTGGCTTGTATG
AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC
TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC
AAGGACAACCTTCACCTGGCAGGAAGTGTCTACAGCTGTGAGGCCGGTACGACCTC
AGAGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCACA
TGTGAAGTGAATCCTGTGATGACTTCATGGCCAACCTCTTAATGGCCGTGTGCTATT
CCAGTAAATCTCCAGCTGGAGCAAAAGTGGATTGTGATGAAGGATTCAATT
AAAGGCAGCTCTGCTAGTTACTGTGCTTGGAATGGAAGCCTTGGAAATAGCAGT
GTTCCAGTGTGTGAACAAATCTTGTCCAAGTCCTCCAGTTATTCTTAATGGGAGACAC
ACAGGAAACCTCTGGAAGTCTTCCCTTGGAAGCAGTAAATTACACATGCGACCCC
CACCCAGACAGAGGGACGAGCTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT
GACCTCAAGGGATGGGTTGGAGCAGCCCTGCGTGTGGAATTCTGGGTAC
TGTCAAGCCCCAGATCATTCTGTTGCCAAGTTGAAAACCAAACCAATGCATCTGAC
TTTCCCATGGGACATCTTAAAGTACGAATGCCGTCTGAGTACTACGGGAGGCCATT
TCTATCACATGTCTAGATAACCTGGTCTGGTCAAGTCCAAAGATGTCTGTAACAGTAAA
TCATGTAACACTCCTCCAGATCCAGTGAATGGCATGGTGCATGTGATCACAGACATCCAG
GTTGGATCCAGAATCAACTATTCTGTACTACAGGGACCGACTCATTGGTCACTCATCT
GCTGAATGTATCCTCTCGGGCAATGCTGCCATTGGAGCACGAAGCCGCAATTGTCAA
CGAATTCCCTGTGGCTACCCCCCACCATGCCAATGGAGATTCAATTAGCACCAACAGA
GAGAATTTCACTATGGATCAGTGGTGCACCTACCGCTGCAATCCTGGAAGCGGAGGGAGA
AAGGTGTTGAGCTGTGGGTGAGCCCTCCATATACTGCACCAAGCAATGACGATCAAGTG
GGCATCTGGAGCGGCCCCGGCCCTCAGTGCATTATACTAACAAATGCACGCCCTCAAAT
GTGGAAAATGGAATTGGTATCTGACAACAGAAGCTTATTTCCTTAATGAAGTGTG
GAGTTAGGTGTACGCTGGCTTGTGATGAAAGGACCCCGCCGTGTGAAGTGCAGGCC
CTGAACAAATGGGAGCCGGAGCTACCAAGCTGCTCCAGGGTATGTGAGCCACCTCCAGAT
GTCCTGCATGCTGAGCGTACCCAAAGGGACAAGGACAACCTTCACCCGGCAGGAAGTG
TTCTACAGCTGTGAGCCCCGCTATGACCTCAGAGGGCTGCGTCTATGCGCTGCACACCC
CAGGGAGACTGGAGCCCTGCAGCCCCACATGTGAAGTGAACATCCTGTGACTTCATG
GGCCAACCTCTTAATGGCCGTGTGCTATTCCAGTAAATCTCAGCTGGAGCAGGAAAGTG
GATTTGTTGTGATGAAGGATTCAATTAAAAGGCAGCTCTGCTAGTTATTGTGCTTG
GCTGGAATGGAAGCCTTGGAAATAGCAGTGTCCAGTGTGTAACAAATCTTGTCCA
AGTCCTCAGTTATTCTTAATGGGAGACACACAGGAAAACCTCTGGAAGTCTTCCCTT
GGAAAAGCAGTAAATTACACATGCCACCCCCACCCAGACAGAGGGACGAGCTCGACCTC
ATTGGAGAGAGCACCACCGCTGCACAAGTGACCCCTCAAGGGAAATGGGTTGGAGCAGC
CCTGCCCTCGCTGTGGAATTCTGGTCAGTCAAGCCCCAGATCATTCTGTTGCC
AAGTTGAAAACCAAACCAATGCATCTGACTTCCCATTGGGACATCTTAAAGTACGAA
TGCCGTCCTGAGTACTACGGGAGGCCATTCTCTATCACATGTCTAGATAACCTGGTCTGG
TCAAGTCCAAAGATGTCTGTAACGTAAATCATGTAACACTCCTCCAGATCCAGTGAAT
GGCATGGTGCATGTGATCACAGACATCCAGGTT
GGATCCAGAATCAACTATTCTGTACTACAGGGACCGACTCATTGGTCACTCATCT
GCTGAATGTATCCTCTCGGGCAATGCTGCCATTGGAGCACGAAGCCGCAATTGTCAA
CGAATTCCCTGTGGCTACCCCCCACCACATGCCAATGGAGATTCAATTAGCACCAACAGA
GAGAATTTCACTATGGATCAGTGGTGCACCTACCGCTGCAATCCTGGAAGCGGAGGGAGA

Fig. 9B (Cont.)

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R	S	L	F	S	L	N	E	V	V	E	F	R	C	Q	P	G	F	V	M
K	G	P	R	R	V	K	C	Q	A	L	N	K	W	Q	P	E	L	P	S
C	S	R	V	C	Q	P	P	D	V	L	H	A	E	R	T	Q	R	D	
K	D	N	F	S	P	G	Q	E	V	F	Y	S	C	E	P	G	Y	D	L
R	G	A	A	S	M	R	C	T	P	Q	G	D	W	S	P	A	A	P	T
C	E	V	K	S	C	D	D	F	M	G	Q	L	L	N	G	R	V	L	F
P	V	N	L	Q	L	G	A	K	V	D	F	V	C	D	E	G	F	Q	L
K	G	S	S	A	S	Y	C	V	L	A	G	M	E	S	L	W	N	S	S
V	P	V	C	E	Q	I	F	C	P	S	P	P	V	I	P	N	G	R	H
T	G	K	P	L	E	V	F	P	F	G	K	A	V	N	Y	T	C	D	P
H	P	D	R	G	T	S	F	D	L	I	G	E	S	T	I	R	C	T	S
D	P	Q	G	N	G	V	W	S	S	P	A	P	R	C	I	G	I	L	
V	E	S	K	Y	G	P	P	C	P	S	C	P	A	P	E	F	L	I	S
G	G	P	S	V	F	L	F	P	P	K	P	K	D	T	L	M	I	R	
T	P	E	V	T	C	V	V	V	D	V	S	Q	E	D	D	P	E	V	Q
N	W	Y	V	D	G	V	E	V	H	N	A	K	T	K	P	R	E	H	Q
F	N	S	T	Y	R	V	V	S	V	L	T	V	L	H	Q	D	W	L	N
G	K	E	Y	K	C	K	V	S	N	K	G	L	P	S	S	I	E	K	T
I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	Q
E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S
D	I	A	V	E	W	E	S	N	G	Q	P	E	D	N	Y	K	T	T	P
P	V	L	D	S	D	G	S	F	F	L	Y	S	R	L	T	V	D	K	S
R	W	Q	E	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H
Y	T	Q	K	S	L	S	L	S	P	G	K								

Fig. 11A (Cont.)

Fig. 11B
 SEQ. ID NO:20

ATGACCGTCGCGCGGCCGAGCGTGCCCCGGCGCTGCC
 CTCCCTGGGGAGCTGCCCGGCTGCTGCTGGTGCTGTTGTGCCCTGCCGGCGTGTGGGGT
 GACTGTGGCCTTCCCCAGATGTACCTAATGCCAGCCAGCTTGGAAAGGCCGTACAAGTTT
 CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTGTGAAAATTCCCTGGCGAGAAG
 GACTCAGTGATCTGCCTTAAGGGCAGTCATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC
 TCGGAGGTGCCAACAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT
 TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTCTCTA
 TCACCAAAACTAATTGCTTCAGAATTAAATGGTCCACAGCAGTCGAATTGTGAAAG
 AAATCATGCCCTAACCGGGAGAAATACGAAATGGTCAGATTGATGTACAGGTGGCATATTA
 TTTGGTGCAACCATTCCCTCTCATGTAACACAGGGTACAAATTATTGGCTCGACTTCTAGT
 TTTTGTCTTATTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGAGAGAAATT
 TATTGTCCAGCACCACAAATTGACAATGGAATAATTCAAGGGAACGTGACCATTATGGA
 TATAGACAGTCTGTAACGTATGCATGTAATAAGGATTACCATGATTGGAGAGCACTCTATT
 TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCCACCATGTAATGC
TCGAGTCCTAACAAATGCACGCCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC
AGAAGCTTATTTCCTTAAATGAAGTTGGAGTTAGGTGTCAGCCCTGGCTTGTCA
AAAGGACCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC
TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCATGTCATGTCAGCGTACCCAAAGGGAC
AAGGACAACCTTCACCTGGCAGGAAGTGTCTACAGCTGTGAGGCCGGTACGACCTC

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AGAGGGGCTGCGTCTATGCGCTGCACACCCAGGGAGACTGGAGCCCTGCAGCCCCACA
 TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTCTTAATGGCCGTGTGCTATTT
 CCAGTAAATCTCCAGCTTGGAGCAAAAGTGGATTTGTGATGAAGGATTCAATTA
 AAAGGCAGCTCTGCTAGTTACTGTGCTTGGCTGGAATGGAAAGCCTTCCAATAGCAGT
 GTTCCAGTGTGTGAACAAATCTTGTCCAAGTCCTCAGTTATTCTAATGGGAGACAC
 ACAGGAAAACCTCTGGAAGTCTTCCCTTGAAAAGCAGTAAATTACACATGCGACCCC
 CACCCAGACAGAGGGACGAGCTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT
 GACCCCTCAAGGGAATGGGTTGGAGCAGCCCTGCCCTCGCTGTGGATTCTG
 GTTGAGTCAAATATGGTCCCCATGCCCATGCCCAGCACCTGAGTTCTG
 GGGGGACCATCAGTCTTCCTGTTCCCCAAAACCCAAGGACACTCTCATGATCTCCGG
 ACCCCCTGAGGTACGTGCGTGGTGGACGTGAGCCAGGAAGACCCGAGGTCCAGTTC
 AACTGGTACGTGGATGGCGTGGAGGTGCTAAATGCCAAGACAAAGCCGGGGAGGAGCAG
 TTCAACAGCACGTACCGTGTGGTCAGCGTCCTCACCGTCTGCACCAGGACTGGCTGAAC
 GGCAAGGAGTACAAGTCAAGGTCTCAACAAAGGCCTCCGTCTCCATCGAGAAAACC
 ATCTCAAAGCAAAGGGCAGCCCCAGAGGCCACAGGTGTACACCCCTGCCCATCCCAG
 GAGGAGATGACCAAGAACCGAGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTACCCAGC
 GACATGCCGTGGAGTGGAGAGCAATGGCAGCCGGAGGACAACATAAGACCACGCCT
 CCCGTGCTGGACTCCGACGGCTCCTCTACAGCAGGCTAACCGTGGACAAGAGC
 AGGTGGCAGGAGGGAAATGTCTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCAC
 TACACACAGAAGAGCCTCTCCGTCTGGTAAATGATAAAAGATCT

Fig. 11B (Cont.)

Fig. 12A

SEQ. ID NO:21

ATA TAC GAA TTC TGG GTC ACT GTG AGG AGC CAC CAA CAT TTG AAG C

Fig. 12B

SEQ. ID NO:22

ACA GTG AGA TCT TTA GTG ATG GTG ATG GTG ATG CGA CAC TTT AAG ACA CTT
 TGG AAC

Fig. 13A

SEQ. ID NO:23

M	T	V	A	R	P	S	V	P	A	A	L	P								
L	L	G	E	L	P	R	L	L	L	V	L	L	C	L	P	A	V	W	G	
D	C	G	L	P	P	D	V	P	N	A	Q	P	A	L	E	G	R	T	S	F
P	E	D	T	V	I	T	Y	K	C	E	E	S	F	V	K	I	P	G	E	K
D	S	V	I	C	L	K	G	S	Q	W	S	D	I	E	E	F	C	N	R	S
C	E	V	P	T	R	L	N	S	A	S	L	K	Q	P	Y	I	T	Q	N	Y
F	P	V	G	T	V	V	E	Y	E	C	R	P	G	Y	R	R	E	P	S	L
S	P	K	L	T	C	L	Q	N	L	K	W	S	T	A	V	E	F	C	K	K
K	S	C	P	N	P	G	E	I	R	N	G	Q	I	D	V	P	G	G	I	L
F	G	A	T	I	S	F	S	C	N	'T	G	Y	K	L	F	G	S	T	S	S
F	C	L	I	S	G	S	S	V	Q	W	S	D	P	L	P	E	C	R	E	I

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Fig. 13A (Cont.)

Fig. 13B

SEQ. ID NO:24

ATGACCGTCGCGCGGCCGAGCGTGCCGCGGCCGCTGCC
CTCCTCGGGGAGCTGCCCGGCTGCTGCTGGTGTGCTGCCGCGCTGCC
GACTGTGGCCTCCCCAGATGTACCTAATGCCAGCCAGCTTGGAAAGGCCGTACAAGTTT
CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTGTGAAAATTCTGGCGAGAAAG
GACTCAGTGTACTGCCCTAACGGGCAGTCATGGTCAGATATTGAAGAGTCTGCAATCGTAGC
TGCAGGGTGCCAACAAGGCTAAATTCTGCATCCCTCAACAGCCTTATATCACTCAGAATTAT
TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCAAGGTTACAGAAAGAGAACCTTCTCTA
TCACCAAAACTAACTTGCCCTCAGAATTAAATGGTCCACAGCAGTCGAATTGTAAAAAG
AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAAGGTGCATATT
TTTGGTGCAACCATTCTCCTCTCATGTAACACAGGGTACAAATTATTGGCTCGACTCTAGT
TTTGTCCTATTTCAGGCAGCTGTCCAGTGGAGTGACCCGTGCCAGAGTCAGAGAAATT
TATTGTCAGCACCACCAAAATTGACAATGGAATAATTCAAGGGAACGTGACCATTATGGA
TATAGACAGTCTGTAACGTATGCATGTAATAAAGGATTCAACATGATTGGAGAGCACTCTATT
TATTGTAAGTGTGAATAATGATGAAGGGAGAGTGGAGTGGCCACACCTGAATGC
TCGAGTCCTAACAAATGCACGCCCTCAAATGTGGAAATGGATATTGGTATCTGACAAC
AGAAGCTTATTTCCTTAATGAAAGTGTGGAGTTAGGTGTCAAGCCTGGCTTGTCAATG

AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC
TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC
AAGGACAACCTTTCACCTGGCAGGAAGTGTCTACAGCTGTGAGCCCGCTACGACCTC
AGAGGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCACA
TGTGAAGTGAATCCTGTGATGACTCATGGGCCAACTTCTTAATGGCCGTGTGCTATT
CCAGTAAATCTCCAGCTGGAGCAAAAGTGGATTGTGATGAAGGATTCAATT
AAAGGCAGCTCTGCTAGTTACTGTGTCTGGCTGGAATGAAAGCCTTGGAAATAGCAGT
GTTCCAGTGTGTGAACAAATCTTGTCCAAGTCCTCCAGTTATTCTTAATGGGAGACAC
ACAGGAAAACCTCTGGAAGTCTTCCCTTGAAAAGCAGTAAATTACACATGCGACCCC
CACCCAGACAGAGGGACGAGCTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT
GACCCTCAAGGGAAATGGGTTGGAGCAGCCCTGCCCTCGCTGTGGATTCTGGTCAC
TGTGAGGAGGCCACCAACATTGAAGCTATGGAGCTATTGTAACCAAAACCTACTAT
GAGATTGGTGAACGAGTAGATTATAAGTGTAAAAAAGGATACTTCTATATACCTCCTCTT
GCCACCCATACTATTGTGATCGGAATCATACTGGCTACCTGTCTCAGATGACGCCGT
TATAGAGAAACATGTCCATATACGGATCCTTAAATGCCAAGCAGTCCCTGCAAAT
GGGACTTACGAGTTGGTTATCAGATGCACTTATTGTAATGAGGGTTATTACTTAATT
GGTGAAGAAATTCTATATTGTGAACCTAAAGGATCAGTAGCAATTGGAGCGGTAAGCCC
CCAATATGTGAAAAGGTTGTGTACACCACCTCCAAAAATAAAAATGGAAAACACACC
TTTAGTGAAGTAGAAGTATTGAGTATCTGATGCAGTAACCTATAGTTGTGATCCTGCA
CCTGGACAGATCCATTTCACTTATTGGAGAGAGCAGGATTATTGTGGTGACAATTCA
GTGTGGAGTCGTGCTGCCAGAGTGTAAAGTGGTCAAATGTCGATTCCAGTAGTCGAA
AATGGAAAACAGATATCAGGATTGGAAAAAAATTACTACAAAGCAACAGTTATGTT
GAATGCGATAAGGGTTTACCTCGATGGCAGCGACACAATTGTCTGTGACAGTAACAGT
ACTTGGGATCCCCAGTTCAAAGTGTCTAAA // GTGTCG // CATCACCATCACCATCAC
TAAAGATCT

Fig. 13B (Cont.)